

# IBOX-601-9L2C6P



- 9th/8th/7th/6th Gen Intel® Core™ i7/i5/i3 (Skylake, Kaby Lake and Coffee Lake) with Desktop-grade Intel® Z370 chipset, support processor up to 65W TDP. Multiple offerings for scalable performance, enhanced performance over previous generation with up to 6 cores;
- Gen 9 LP implements a high-performance and low-power HW acceleration for video decoding operations for multiple video codecs. Expected more than 16 simultaneous decode streams @1080p;
- Up to 4 front-access 2.5" SSD trays, RAID 0, 1, 5 supported, besides that, it support working with up two 3\* PCIe/PCI slot;
- IBOX-601-9L2C4P-1P series is offering 9 Independent GbE LAN with 6\* RJ45 or M12 IEEE 802.3af PoE LAN;
- 2\* M.2 sockets, 1\* M.2 Key M, 1\* M.2 Key E for SSD and WiFi, 1\* Mini PCIe slot comes with SIM card slot support 4G LTE Module;
- 9V to 36V DC Power Input with Surge Protection, configurable Ignition Power Control;
- Fully enclosed full aluminum alloy with fanless cooling system offering anti-interference structure and stable system with Modular parts cable-free design for better vibration resistance.



Front Panel



Option A



Option B

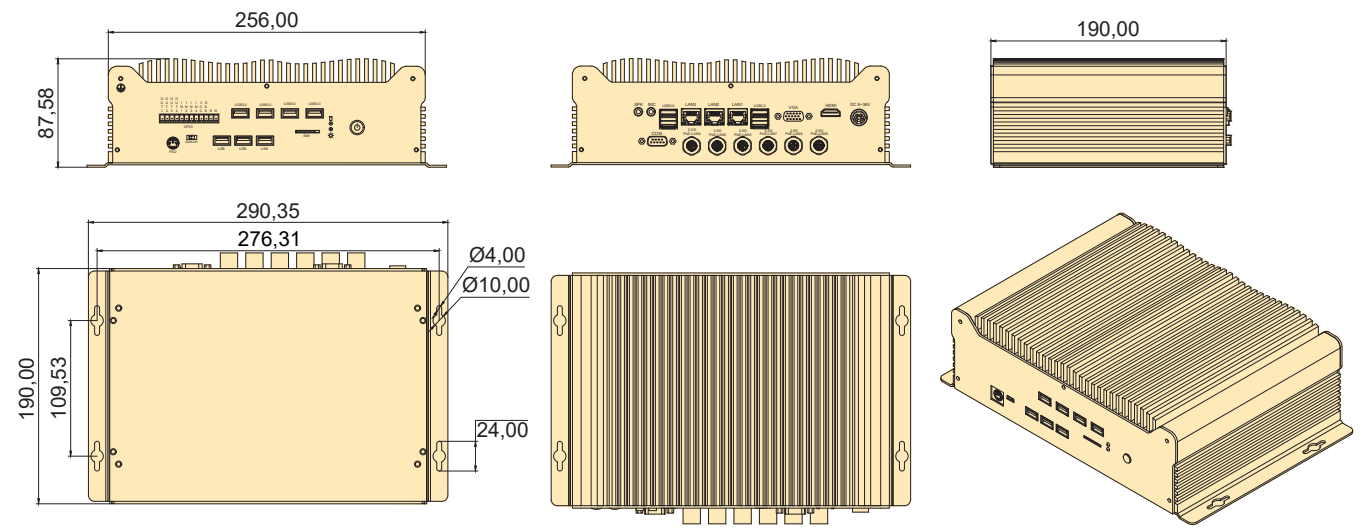
The actual appearance is subject to the final configuration.

## Specifications

|                          |                                                                                             |                                                                                                                                                                                                                                                                                       |                                 |                                                                          |
|--------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------------------------------------------------------|
| Model                    | IBOX-601-9L2C6P                                                                             |                                                                                                                                                                                                                                                                                       |                                 |                                                                          |
| Supported OS             | Win 7, Win 8, Win 10, Win 11, Linux (Ubuntu, Debian, Kali, CentOS, etc.); WES 7; Win 10 IoT |                                                                                                                                                                                                                                                                                       |                                 |                                                                          |
| Chipset                  | Intel® Z370 Chipset                                                                         |                                                                                                                                                                                                                                                                                       |                                 |                                                                          |
| CPU                      | Processor Socket                                                                            | Intel® Desktop Processors Socket LGA1151                                                                                                                                                                                                                                              |                                 |                                                                          |
|                          | Series                                                                                      | 6th Gen. Intel® Core™ Processor                                                                                                                                                                                                                                                       | Intel® Celeron® G4900 Processor | 7th-9th Gen. Intel® Core™ Processor                                      |
|                          | TDP                                                                                         | Up to 65W                                                                                                                                                                                                                                                                             | 54W                             | Up to 65W                                                                |
|                          | Graphic                                                                                     | Intel® HD Graphics 530                                                                                                                                                                                                                                                                | Intel® UHD Graphics 610         | 7th Gen: Intel® HD Graphics 630<br>8th/ 9th Gen: Intel® UHD Graphics 630 |
| RAM                      | Type&Qty                                                                                    | 2* SO-DIMM Socket                                                                                                                                                                                                                                                                     | 2* SO-DIMM Socket               | 2* SO-DIMM Socket                                                        |
|                          | Frequency                                                                                   | DDR4-1866/2133 MHz                                                                                                                                                                                                                                                                    | DDR4-2400 MHz                   | DDR4-2400/2666 MHz                                                       |
|                          | Capacity                                                                                    | Up to 32GB                                                                                                                                                                                                                                                                            | Up to 32GB                      | Up to 32GB                                                               |
| Storage Device           | SATA                                                                                        | 1* 2.5" SATA3.0 Bay on board (6Gb/s); 3* SATA3.0 connectors (6Gb/s), Support RAID (0/1/5)                                                                                                                                                                                             |                                 |                                                                          |
|                          | MSATA                                                                                       | 1* mSATA3.0 slot on board (6Gb/s)                                                                                                                                                                                                                                                     |                                 |                                                                          |
|                          | M.2                                                                                         | 1* M.2 (NGFF) 2280 M-key slot, support PCIe4 Gen.3 NVMe/ SATA3.0 SSD                                                                                                                                                                                                                  |                                 |                                                                          |
| I/O Interface            | COM                                                                                         | 1* RS232/485 with RJ45 connector, 1* RS232/485 with DB9 connector, switchable by jumper                                                                                                                                                                                               |                                 |                                                                          |
|                          | Ethernet                                                                                    | (Option A&B) 3* Intel® i211 GbE LAN, RJ45 connector;<br>(Option A) 6* Intel® i226 GbE LAN, RJ45 connector (One of Poe GbE LAN is shared with Mini-PCIe's PCIe signal)<br>(Option B) 6* Intel® i226 GbE LAN, M12 connector (One of Poe GbE LAN is shared with Mini-PCIe's PCIe signal) |                                 |                                                                          |
|                          | USB                                                                                         | 8* USB 3.0; 3* USB2.0; 1* Internal USB2.0                                                                                                                                                                                                                                             |                                 |                                                                          |
|                          | Video                                                                                       | 1* HDMI, Support 4096x2304@24Hz, (Optional 1* DP, Support 4096 x 2304@60Hz);<br>1* VGA, Support 1920x1200@60Hz;<br>Optional with one more HDMI port which is expanded by TP-IPC daughter card to support Triple Displays                                                              |                                 |                                                                          |
|                          | Audio                                                                                       | 1* MIC, 1* SPK; With 5.1 channels HD Audio Codec Realtek ALC662                                                                                                                                                                                                                       |                                 |                                                                          |
|                          | SIM                                                                                         | 1* External SIM card slot connected to Mini-PCIe                                                                                                                                                                                                                                      |                                 |                                                                          |
|                          | Power Supply                                                                                | 9-36 VDC; 1* 4-Pin DC Power Jack (Circular DIN Connectors, Full-Shield, optional with Phoenix Terminal Connector)                                                                                                                                                                     |                                 |                                                                          |
|                          | Other                                                                                       | 1* 8-bit GPIO (4-Inputs/4-Outputs, 0-5V Input Range) and 1* Remote Switch on Terminal Block (12-Pin, 3.81mm).<br>1* PS/2 for keyboard/ mouse; 1* Auto-On Switch; 1* TPM header (2*8-pin)                                                                                              |                                 |                                                                          |
|                          | Extended Capabilities                                                                       | 1* Full Size Mini-PCIe with SIM card slot; (PCIe+USB2.0, PCIe signal is shared with a LAN port);<br>1* M.2 2230 E-key Slot (PCIe+USB2.0, support WiFi+BT)                                                                                                                             |                                 |                                                                          |
| Environment              | Operating Temp.                                                                             | -10 ~ 55 °C w/ 0.7m/s Airflow                                                                                                                                                                                                                                                         |                                 |                                                                          |
|                          | Storage Temp.                                                                               | -40 ~ 85 °C (-40~185 °F)                                                                                                                                                                                                                                                              |                                 |                                                                          |
|                          | Relative Humidity                                                                           | 40 °C @ 95%, Non-Condensing                                                                                                                                                                                                                                                           |                                 |                                                                          |
| Physical Characteristics | Dimensions                                                                                  | 290.35* 87.58* 186 mm (W* H* D)                                                                                                                                                                                                                                                       |                                 |                                                                          |
|                          | Net Weight                                                                                  | 3.9 KG                                                                                                                                                                                                                                                                                |                                 |                                                                          |
| Regulation               | EMC                                                                                         | CE/FCC Class B, CCC                                                                                                                                                                                                                                                                   |                                 |                                                                          |
|                          | Safety                                                                                      | CE-LVD, RoHS, CCC                                                                                                                                                                                                                                                                     |                                 |                                                                          |

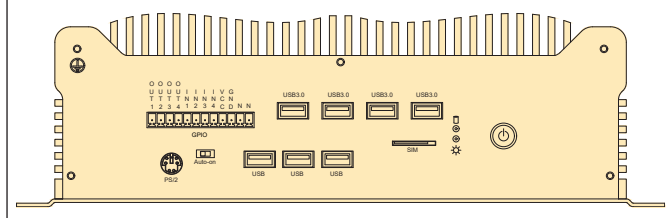
## Dimension

Unit:mm

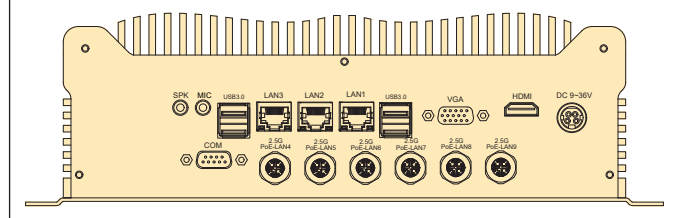


The actual appearance and dimensions are subject to the final configuration

### Front Panel External I/O Mechanical Layout/Drawing



### Rear Panel External I/O Mechanical Layout/Drawing



## Ordering Information

| SO-DIMM Socket |         | M.2 2280 M-key Slot |            | mSATA3.0 Slot |     | SATA3.0 Connector |                        | Full Size Mini-PCle |            | M.2 2230 E-key Slot |              | COM |  | 1.0 GbE LAN |  | PoE 2.5 GbE LAN |  |
|----------------|---------|---------------------|------------|---------------|-----|-------------------|------------------------|---------------------|------------|---------------------|--------------|-----|--|-------------|--|-----------------|--|
| 2              |         | 1                   |            | 1             |     | 4                 |                        | 1                   |            | 1                   |              | 2   |  | 3           |  | 6               |  |
| USB 2.0        | USB 3.0 | Internal USB2.0     | HDMI Or DP | VGA           | MIC | SPK               | External SIM Card Slot | PS/2                | 8-bit GPIO | Auto-On Switch      | Power Supply |     |  |             |  |                 |  |
| 3              | 8       | 1                   | 1          | 1             | 1   | 1                 | 1                      | 1                   | 1          | 1                   | DC 9-36V     |     |  |             |  |                 |  |

## Processors Info & Available List

| CPU                   | Code Name   | Total Cores | Total Threads | Max Turbo Frequency | Base Frequency | Cache                    | TDP  | Memory Types | Integrated Graphics     |
|-----------------------|-------------|-------------|---------------|---------------------|----------------|--------------------------|------|--------------|-------------------------|
| Intel® Core™ i3-6100  | Skylake     | 2           | 4             | -                   | 3.70 GHz       | 3 MB Intel® Smart Cache  | 51 W | DDR4         | Intel® HD Graphics 530  |
| Intel® Core™ i5-6500  | Skylake     | 4           | 4             | 3.60 GHz            | 3.20 GHz       | 6 MB Intel® Smart Cache  | 65 W | DDR4         | Intel® HD Graphics 530  |
| Intel® Core™ i7-6700  | Skylake     | 4           | 8             | 4.00 GHz            | 3.40 GHz       | 8 MB Intel® Smart Cache  | 65 W | DDR4         | Intel® HD Graphics 530  |
| Intel® Celeron® G4900 | Coffee Lake | 2           | 2             | -                   | 3.10 GHz       | 2 MB Intel® Smart Cache  | 54 W | DDR4         | Intel® UHD Graphics 610 |
| Intel® Core™ i3-7100  | Kaby Lake   | 2           | 4             | -                   | 3.90 GHz       | 3 MB Intel® Smart Cache  | 51 W | DDR4         | Intel® HD Graphics 630  |
| Intel® Core™ i5-7400  | Kaby Lake   | 2           | 4             | 3.50 GHz            | 3.00 GHz       | 6 MB Intel® Smart Cache  | 65 W | DDR4         | Intel® HD Graphics 630  |
| Intel® Core™ i7-7700  | Kaby Lake   | 4           | 8             | 4.20 GHz            | 3.60 GHz       | 8 MB Intel® Smart Cache  | 65 W | DDR4         | Intel® HD Graphics 630  |
| Intel® Core™ i3-8100  | Coffee Lake | 4           | 4             | -                   | 3.60 GHz       | 6 MB Intel® Smart Cache  | 65 W | DDR4         | Intel® UHD Graphics 630 |
| Intel® Core™ i5-8500  | Coffee Lake | 6           | 6             | 4.10 GHz            | 3.00 GHz       | 9 MB Intel® Smart Cache  | 65 W | DDR4         | Intel® UHD Graphics 630 |
| Intel® Core™ i7-8700  | Coffee Lake | 6           | 12            | 4.60 GHz            | 3.20 GHz       | 12 MB Intel® Smart Cache | 65 W | DDR4         | Intel® UHD Graphics 630 |
| Intel® Core™ i3-9300  | Coffee Lake | 4           | 4             | 4.30 GHz            | 3.70 GHz       | 8 MB Intel® Smart Cache  | 62 W | DDR4         | Intel® UHD Graphics 630 |
| Intel® Core™ i5-9400  | Coffee Lake | 6           | 6             | 4.10 GHz            | 2.90 GHz       | 9 MB Intel® Smart Cache  | 65 W | DDR4         | Intel® UHD Graphics 630 |
| Intel® Core™ i7-9700  | Coffee Lake | 8           | 8             | 4.70 GHz            | 3.00 GHz       | 12 MB Intel® Smart Cache | 65 W | DDR4         | Intel® UHD Graphics 630 |
| Intel® Core™ i9-9900T | Coffee Lake | 8           | 16            | 4.40 GHz            | 2.10 GHz       | 16 MB Intel® Smart Cache | -    | DDR4         | Intel® UHD Graphics 630 |

All products and company name listed are trademarks or trade names of their respective companies.

!! Note: For more interface configuration or available processors, please consult the sales.

## Packing list

| Default Items           | Qty |
|-------------------------|-----|
| IBOX-601-9L2C6P Unit    | 1   |
| AC-to-DC Adapter        | 1   |
| Power cable 3-pin 150cm | 1   |

## Options for default items

| Optional Items                    | Qty |
|-----------------------------------|-----|
| Power cable 3-pin 150cm, USA type | -   |
| Power cable 3-pin 150cm, EU type  | -   |
| Power cable 3-pin 150cm, UK type  | -   |
| Swappable hard-drive bracket kit  | -   |

## Optional accessories or internal modules for unit

| Optional Items                                  | Max Qty | Description                                                                                  |
|-------------------------------------------------|---------|----------------------------------------------------------------------------------------------|
| Isolated 8-bit GPIO, 9-24V                      | 1       | Digital signal, Phoenix Terminal connector, connected by non-standard M.2 interface          |
| Isolated 8-bit GPIO with current loading, 9-26V | 1       | Digital signal, Phoenix Terminal connector, connected by non-standard M.2 interface          |
| 4G Module                                       | 1       | Connected by Mini-PCIe interface                                                             |
| WiFi Module without AP mode                     | 1       | Connected by Mini-PCIe interface, M.2 interface or internal USB interface                    |
| WiFi Module with AP mode                        | 1       | Connected by Mini-PCIe interface                                                             |
| Dual channel CAN-Bus Module                     | 2       | Connected by Mini-PCIe or M.2 interface                                                      |
| Ignition Switch Module                          | 1       | Phoenix Terminal connector, connected by internal power switch and 4-pin ATX power connector |

!! Note: As this product has expansion slots, please consult sales for the specific maximum number of expandable interfaces.